Advanced Computer Networks

Fall 2010
Instructor: Haining Wang

Why CS634?

- For credits
- Department Requirement
- Networking is important
What’s CS634

- This is a graduate level course
  - Reading papers
- One term project
  - Major factor in your grade
- Two class presentations
  - Teach us
- Four paper summaries
  - Insightful comments

Grading Policy

- **20%** Paper reviews (2-page long)
  - Insightful (3), helpful (2), pointless (1)
- **20%** Class presentation
- **40%** Term project
- **20%** Final exam
Our Goal

- Fundamental concepts & methodologies
  - Classical papers
- Latest network research activities
  - Recent papers
- How to do research networking area
  - Required skill
  - Resources to seek

Required skills

- System programming
  - Network simulation
  - Kernel hacking
  - Data collection and processing
- Analytical skills
  - Probability and statistics
  - Queueing theory
  - Mathematical modeling
  - Game theory
Useful resources

- Conferences
  - ACM SIGCOMM, IMC(W), WWW, MOBICOM, Mobisys, SIGMETRICS, CCS, SOSP, CoNEXT
  - IEEE INFOCOM, S&P (Security and Privacy)
  - USENIX NSDI, OSDI, Security Symposium, Annual Technical Conference
- Journals (ACM and IEEE transactions)
  - ACM CCR

Paper Reviews

- Summarize the main idea of the paper
  - Problem they solved
  - Approach they took: novelty
  - How did they evaluate
- Pros and Cons
- Any ways to improve the work?
Term Project

- Proposal
  - Problem statement
- Progress report
  - Preliminary results
- Final report
  - Complete project report